

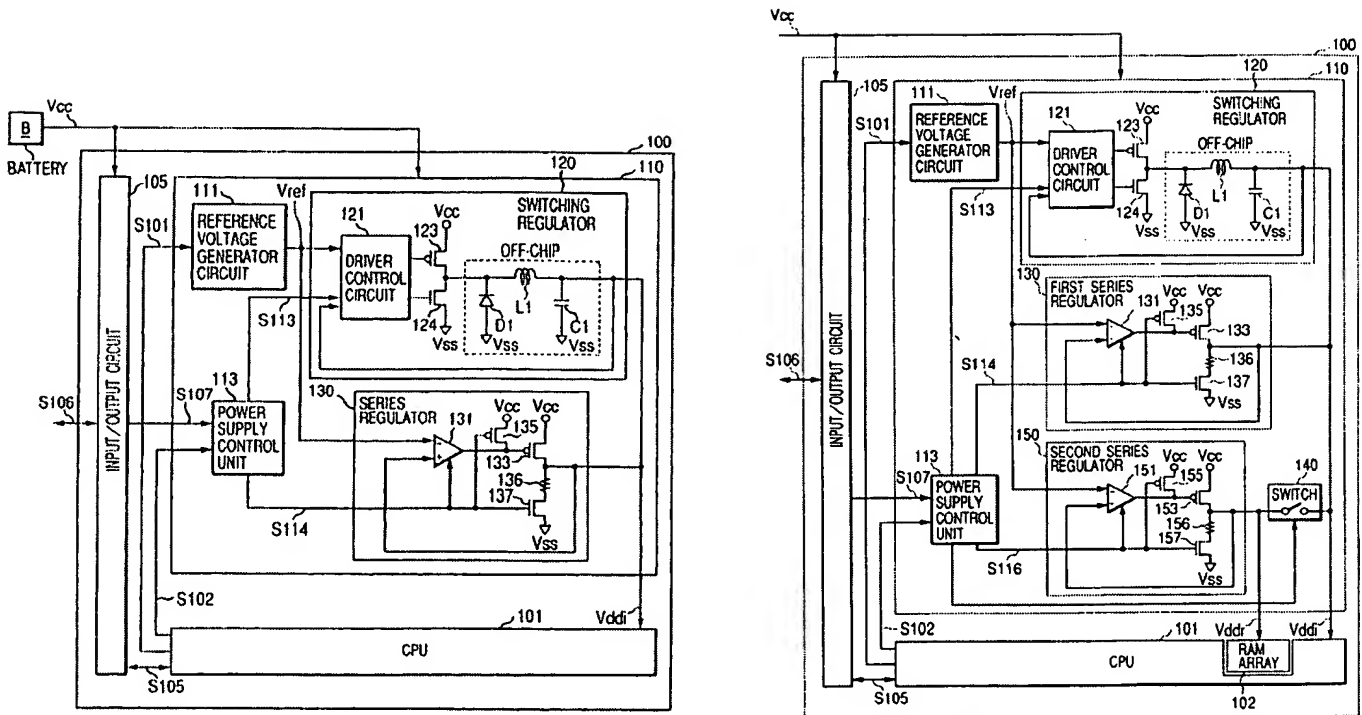
REMARKS

Claims 1 and 10 have been amended and claims 7, 8, 15 and 16 have been canceled. Claims 1-6, 9-14 and 17 remain pending. Applicants reserve the right to pursue the original and any other claims in this and other applications.

Claims 1-2, 6-8, 10 and 14-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hiraki (U.S. Patent No. 6,424,128). Applicants respectfully traverse this rejection.

Claim 1 recites an integrated circuit for supplying power. The circuit comprises "an IC chip having a rectangular shape and having a first edge and a second edge opposite the first edge; a switching regulator implemented on said IC chip and having a driver transistor . . .; and a series regulator implemented on said IC chip, wherein said driver transistor of said switching regulator is positioned near the first edge and said series regulator is positioned near the second edge." According to claim 1, "said driver transistor of said switching regulator and said series regulator are positioned near opposite corners of said IC chip on a diagonal line of said IC chip." Applicants respectfully submit that Hiraki fails to disclose the claimed invention.

Specifically, Applicants respectfully submit that Hiraki fails to disclose a "driver transistor of said switching regulator and said series regulator [being] positioned near opposite corners of said IC chip on a diagonal line of said IC chip." Hiraki by contrast discloses an integrated chip 110 having a switching regulator 120, a first series regulator 130, and a second series regulator 150 (in some embodiments). Sample configurations disclosed in Hiraki's Figures 1 and 6 are reproduced on the next page for the Examiner's convenience.



Hiraki Figures 1 and 6

As can be seen above, Hiraki discloses driver transistors 123, 124 of a switching regulator 120 located at the middle portion near the upper edge of the integrated circuit chip 110. In Figure 1, a series regulator 130 is positioned at the bottom right of the chip 110 along a diagonal that extends from the bottom right hand side of the chip 110 to the top left hand side of the chip 110. In Figure 6, there are two series regulators 130, 150 positioned about the diagonal that extends from the bottom right hand side of the chip 110 to the top left hand side of the chip 110. Regardless of the disclosed configuration, however, the driver transistors 123, 124 of the Hiraki switching regulator 120 are located nowhere near the “opposite” corner (i.e., top left corner) of the chip 110 along the diagonal line since a reference voltage generating circuit 111 is located there. As such, Hiraki fails to disclose the claimed invention.

The claimed invention requires that the driver transistor of said switching regulator and said series regulator be positioned near opposite corners of said IC chip and on a diagonal line of said IC chip. This positional arrangement provides an advantage in which the distance between the driver transistor and the series regulator is maximized to achieve a maximum noise reduction effect. This is something Hiraki fails to achieve.

Claim 10 similarly recites that "said driver transistor of said switching regulator and said plurality of series regulators are positioned near opposite corners of said IC chip on a diagonal line of said IC chip." Accordingly, claim 10 is allowable over Hiraki for at least the reasons set forth above and on its own merits.

Claims 2 and 6 depend from claim 1 and are allowable for at least the reasons discussed above. Claim 14 depends from claim 10 and is allowable for at least the reasons discussed above. Claims 7, 8, 15 and 16 have been canceled solely to further the prosecution of the application. Applicants respectfully request the withdrawal of the rejection and allowance of the claims.

Claims 3 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hiraki in view of Maruo (U.S. Patent No. 7,003,270). Applicants respectfully traverse this rejection.

Claim 3 depends from claim 1. Claim 11 depends from claim 10. As set forth above, Hiraki fails to disclose or suggest all of the limitations of claims 1 and 10. As such, Hiraki alone can not render claims 3 and 11 unpatentable.

The Office Action relies on Maruo for disclosing the use of a series regulator to supply power to a high-frequency circuit. Maruo, however, fails to disclose or suggest that a "driver transistor of said switching regulator and said series

regulator are positioned near opposite corners of said IC chip on a diagonal line of said IC chip" as recited in claim 1. Furthermore, Maruo does not disclose or suggest that a "driver transistor of said switching regulator and said plurality of series regulators are positioned near opposite corners of said IC chip on a diagonal line of said IC chip," as recited in claim 10. As such, Maruo fails to cure the deficiencies of Hiraki. Applicants respectfully submit that the cited combination of Hiraki and Maruo must fail to disclose or suggest the limitations of claims 3 and 11. Accordingly, Applicants respectfully request the withdrawal of the rejection and the allowance of the claims.

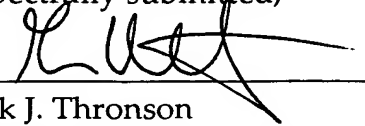
Claims 4-5, 9, 12-13, and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hiraki. Applicants respectfully traverse this rejection.

As previously discussed, Hiraki fails to disclose or suggest the inventions of claims 1 and 10. Claims 4-5 depend from claim 1. Claims 12-13 and 17 depend from claim 10. As such, Hiraki alone can not render claims 4-5, 9, 12-13, and 17 unpatentable. Applicants respectfully request the rejection be withdrawn and the claims allowed.

In view of the above, Applicants believe the pending application is in condition for allowance.

Dated: November 29, 2006

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